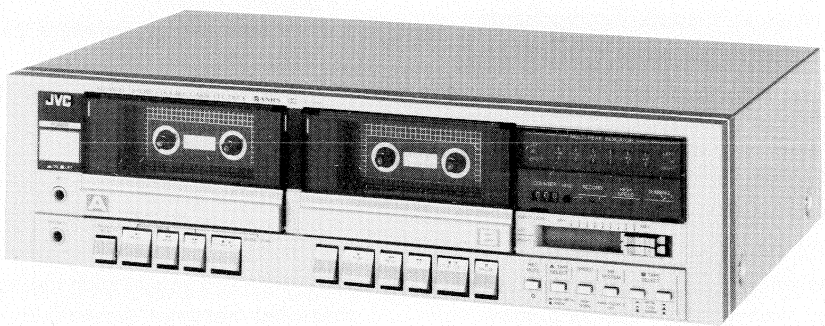
JVC

SERVICE MANUAL

STEREO DOUBLE CASSETTE DECK

MODEL KD-W110 A/B/C/E/J/U/E/NA NC/NJ/NU/NE



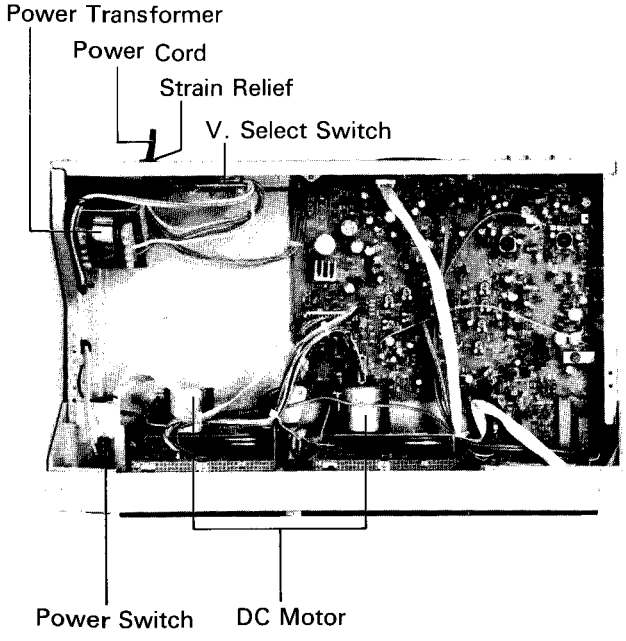
Contents

	Page
Safety Precautions	2
Features	3
Specifications	3
Location of Controls and Connections	4
Location of Main Parts	5
Dimensions	5
Removal of Main Parts	6
Main Adjustments	8
Electrical Operation	11
Block Diagram	12
Standard Schematic Diagram	13
Wiring Connection	14
Location of P.C. Board Parts	15
P.C. Board Parts List	16
Parts List of Enclosure Assembly	17
Exploded View of Enclosure Assembly	19
Exploded View of Mechanism Assembly	20
Parts List of Mechanism Assembly	21
Accessories	23
Packing, Packing Parts List	Back cover

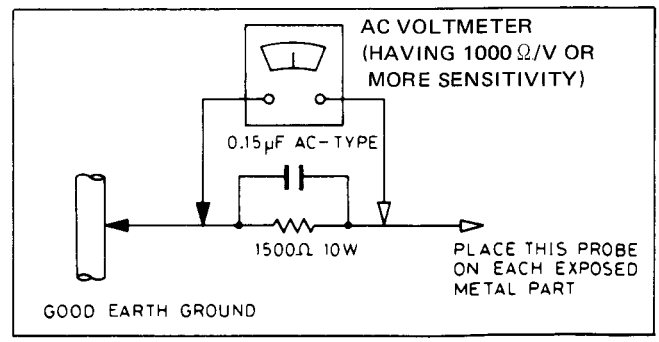
No. 4227
December 1983

Safety precaution

1. The design of this product contains special hardware. Many circuits and components specially for safety purposes.
   For continued protection, no changes should be made to the original design unless authorized in writing by the manufacturer. Replacement parts must be identical to those used in the original circuits. Service should be performed by qualified personnel only.
2. Alterations of the design or circuitry of the product should not be made. Any design alterations or additions will void the manufacturer's warranty and will further relieve the manufacturer of responsibility for personal injury or property damage resulting therefrom.
3. Many electrical and mechanical parts in the product have special safety-related characteristics. These characteristics are often not evident from visual inspection nor can the protection afforded by then necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in the parts list of Service manual. Electrical components having such features are identified by (⚠) on the schematics and parts list in Service manual. The use of a substitutue replacement which does not have the same safety characterisitics as the recommended replacement part shown in the parts list in Service manual may create shock, fire, or other hazards.
4. The leads in the products are routed and dressed with ties, clamps, tubings barriers and/or the like to be separated from live parts, high temperature part, moving parts and/or sharp edges for the prevention of electric shock and fire hazard.
   When service is required, the original lead routing and dress should be observed, and they should be confirmed to be returned to normal, after re-assembling.



5. Leakage current check
   (Safety for electrical shock hazard)
   After re-assembling the product, always perform an isolation check on the exposed metal parts of the Products (antenna terminals, knobs, metal cabinet, screw heads, earphone jack, control shafts, etc.) to be sure the product is safe to operate without danger of electrical shock.
   Do not use a line isolation transformer during this check.
   - Plug the AC line cord directly into the AC outlet. Using a "Leakage Current Tester", measure the leakage current from each exposed metal part of the cabinet, particularly any exposed metal part having a return path to the chassis, to a known good earth ground (water pipe, etc,). Any leakage current must not exceed 0.5 mA AC (r.m.s.).
   - Alternate check method.
     Plug the AC line cord directly into the AC outlet. Use an AC voltmeter having 1,000 ohms per volt or mroe sesitivity in the following manner. Connect a 1500 Ω 10 W resistor paralleled by a 0.15 μF AC-type capacitor between an exposed metal part and a known good earth ground (water pipe, etc.).
     Measure the AC voltage across the resistor with the AC voltmeter.
     Move the resistor connection to each exposed metal part, particularly any exposed metal part having a return path to the chassis, and measure the AC voltage across the resistor. Now, reverse the plug in the AC outlet and repeat each measurement. Any voltage measured musy not exceed 0.75 V AC (r.m.s.).
     This corresponds to 0.5 mA AC (r.m.s.).



Features

1. Twin logic control deck mechanisms
2. Double speed dubbing
3. Continuous play
4. Music Scan (Deck **A**)
   "Under license of Staar S.A., Brussels, Belgium".
5. ANRS/Dolby* B noise reduction
6. Rec mute (Deck **B**)
7. Timer start
8. 6-LED multi-peak indicator
9. Gear/oil-damped cassette lid
10. Metaperm head

* Dolby and the double-D symbol are trademarks of Dolby Laboratories Licensing Corporation.

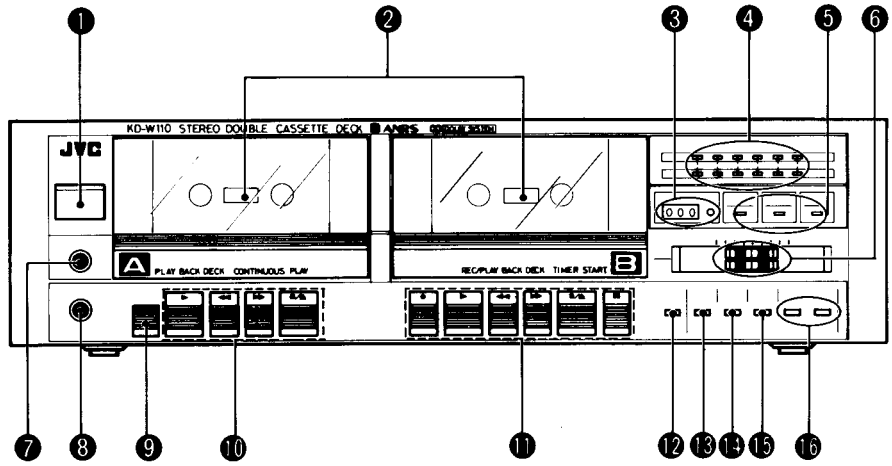
Specifications

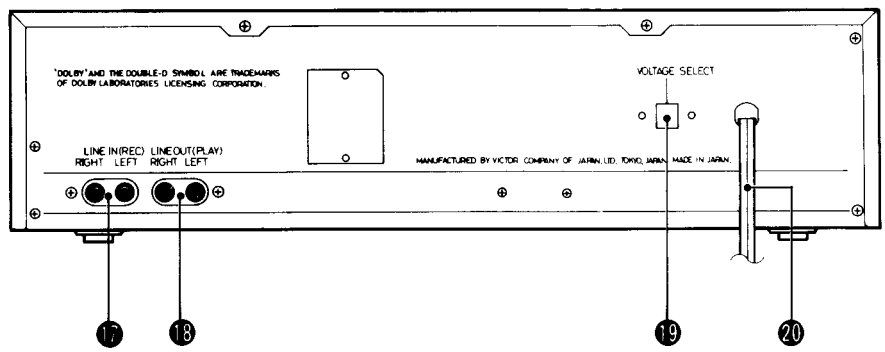
Type	: Stereo double cassette deck
Track system	: 4-track, 2-channel
Tape speed	: At normal speed; 1-7/8 inch/sec (4.8 cm/sec) At double speed; 3-3/4 inch/sec (9.5 cm/sec)
Frequency response (KD-W110A/C/J/U/E/NA/NC/NJ/NU/NE)	: (0 dB recording) Metal tape; 30 – 12,500 Hz (±3 dB) Chrome tape; 30 – 8,000 Hz (±3 dB) Normal tape; 30 – 8,000 Hz (±3 dB) (-20 dB recording) Metal tape; 20 – 17,000 Hz 30 – 16,000 Hz (±3 dB) Chrome tape; 20 – 17,000 Hz 30 – 16,000 Hz (±3 dB) Normal tape; 20 – 16,000 Hz 30 – 15,000 Hz (±3 dB) (-20 dB recording) Metal tape; 20 – 17,000 Hz (DIN 4550) Chrome tape; 20 – 17,000 Hz (DIN 4550) Normal tape; 20 – 16,000 Hz (DIN 4550)
Fequency response (KD-W110B/NB)	: (0 dB recording) Metal tape; 30 – 12,500 Hz (±3 dB) Chrome tape; 30 – 8,000 Hz (±3 dB) Normal tape; 30 – 8,000 Hz (±3 dB) (-20 dB recording) Metal tape; 30 – 16,000 Hz (±3 dB) Chrome tape; 30 – 16,000 Hz (±3 dB) Normal tape; 30 – 15,000 Hz (±3 dB)
S/N ratio	: 58 dB (S = 1 kHz, K3 = 3 % N = A-weighted, Metal tape) The S/N is improved by 5 dB at 1 kHz and by 10 dB at above 5 kHz with ANRS/DOLBY B NR on.
Wow and flutter	: 0.08 % (WRMS) 0.20 % (DIN 45 500)
Crosstalk	: 60 dB (1 kHz)
Harmonic distortion	: K3; 0.5 %, THD; 1.0 % (metal tape, 1 kHz 0 VU)
Channel separation	: 40 dB (1 kHz)
Heads	: Deck **A**; METAPERM head for playback Dummy head for erasure Deck **B**; METAPERM head for recording/playback 2-gap ferrite head for erasure
Motors	: Electronic governed DC motor x 2 (for Deck **A**, **B**)
Fast forward time	: Approx. 100 sec. with C-60
Rewind time	: Approx. 100 sec. with C-60
Input terminals	
Mic jack x 2	: Max. sensitivity; 0.2 mV (-74 dBV) Matching impedance; 600 Ω – 10 kΩ
Input jack x 2	: Min. input level; 80 mV Input impedance; 60 kΩ
Output terminals	
Output jack x 2	: Output level; 300 mV Output impedance; 6 kΩ
Phones jack x 1	: Output level; 0.3 mW/8 Ω Matching impedance; 8 Ω – 1 kΩ
Power requirement	: AC 120 V, 60 Hz (KD-W110/C/J/NC/NJ) AC 240/220/120 V, 50/60 Hz (KD-W110A/B/E/NA/NB/NE) AC 240/220/120/100 V, 50/60 Hz (KD-W110U/NU)
Power consumption	: 15 Watt.
Dimensions	: 17-1/8" (435 mm) W 4-9/16" (115 mm) H 11" (279 mm) D
Weight	: 10.3 lbs (4.7 kg)

Accessories : **Pin plug cord . . . 2**

Design and specifications are subject to change without notice.

Location of Control and Connections

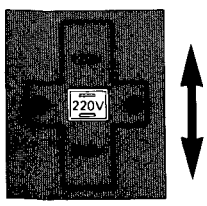



"DOLBY" AND THE DOUBLE-D SYMBOL ARE TRADEMARKS OF DOLBY LABORATORIES LICENSING CORPORATION.
VOLTAGE SELECT
LINE IN(REC) LINE OUT(PLAY)
RIGHT LEFT RIGHT LEFT
MANUFACTURED BY VICTOR COMPANY OF JAPAN, LTD. TOKYO, JAPAN. MADE IN JAPAN.

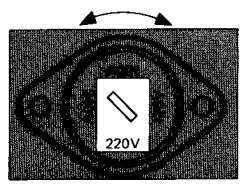
1. Power switch
2. Cassette holders
3. Counter/Reset button (Deck B)
4. Multi peak indicators
5. Indicators
   RECORD
   HIGH SPEED
   DUBBING
6. INPUT LEVEL controls
7. MIC jack
8. PHONES jack
9. CONTINUOUS PLAY button
10. Cassette operation buttons (Deck A)
    ► PLAY
    ◄◄ REW
    ►► FF
    ■ STOP/ ≙ EJECT
11. Cassette operation buttons (Deck B)
    O REC
    ► PLAY
    ◄◄ REW
    ►► FF
    ■ STOP/ ≙ EJECT
    II PAUSE
12. REC MUTE (O) switch
13. TAPE SELECT switch (Deck A)
14. SPEED switch
15. NR SYSTEM switch
16. TAPE SELECT switches (Deck B)
17. LINE IN (REC) jacks
18. LINE OUT (PLAY) jacks
19. VOLTAGE SELECT switch (KD-W110A/B/E/U)
20. Power cord

SELECTING THE AC POWER VOLTAGE (KD-W110A/B/E/U)

KD-W110A/B/E



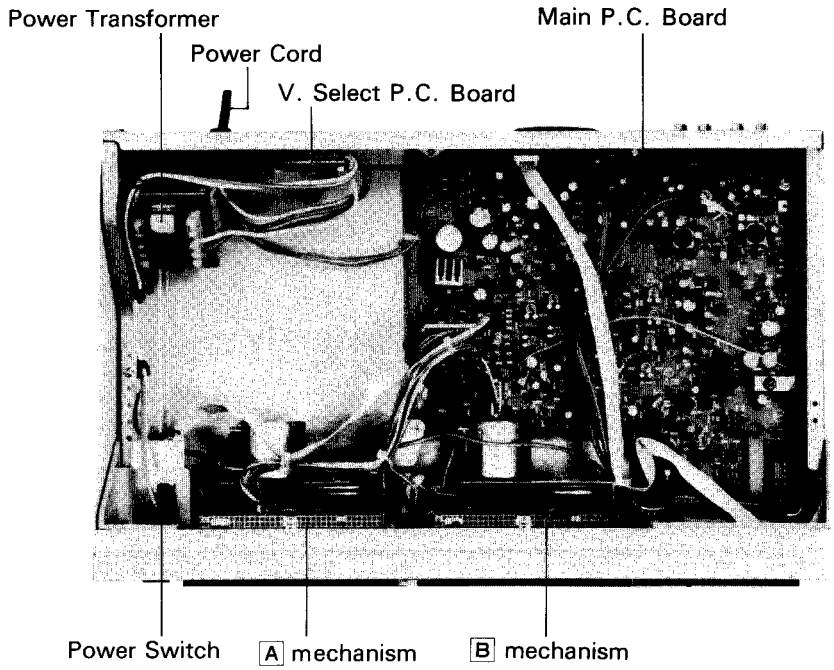
KD-W110U



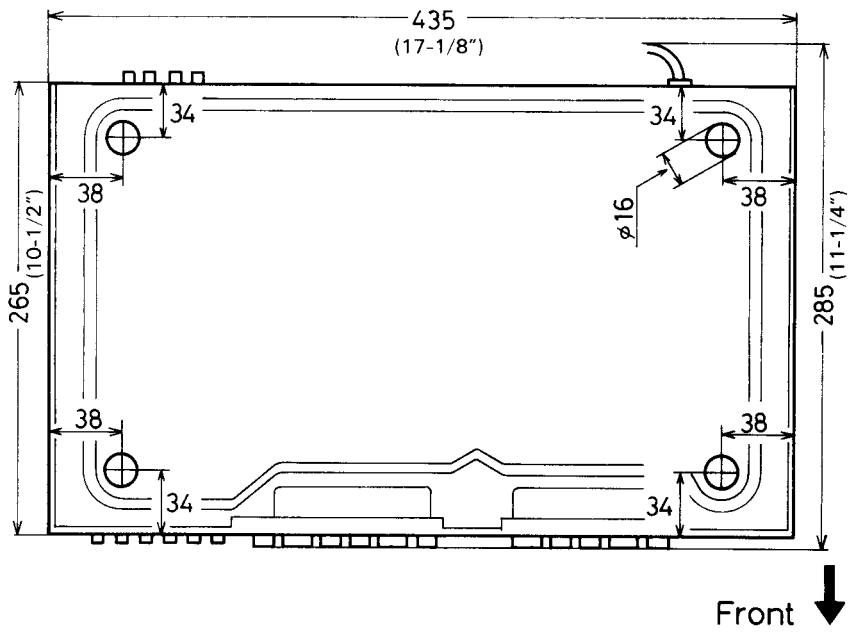
- **KD-W110C/J is not provided with voltage selector.**

When this deck is used in an area where the supply voltage is different from the preset voltage, reset the voltage selector to the correct position.
Turn the voltage selector with a screwdriver so that the desired voltage marking is set to the arrow mark.

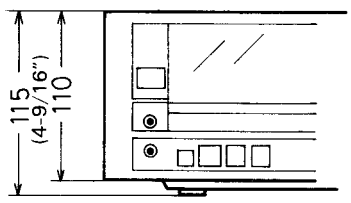
Location of Main Parts



Dimension



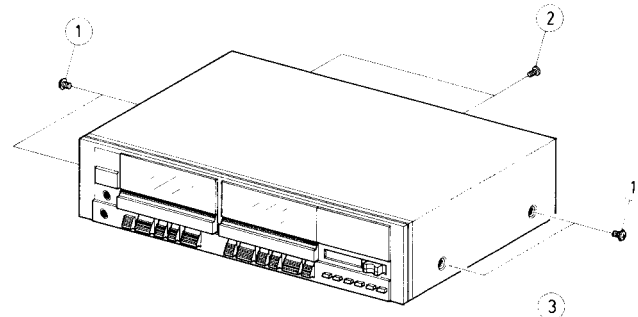
unit : mm



Removal of the main parts

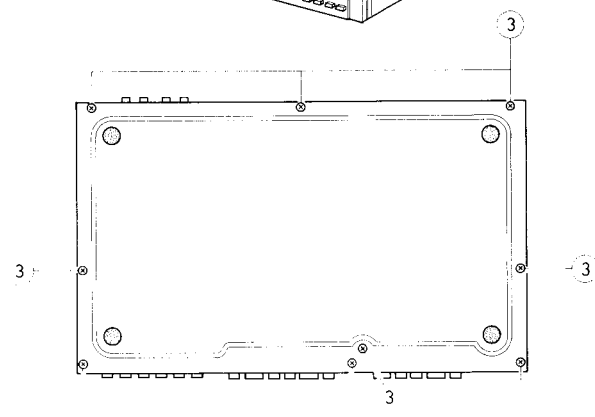
■ **Top cover**

1) Remove 4 screws (1) fastening the top cover from both sides.
2) Remove 2 screws (2) fastening the top cover from the rear side.



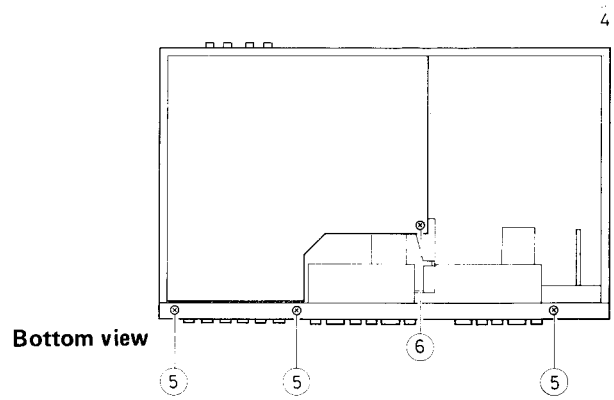
■ **Bottom cover**

Remove 9 screws (3) and (4).



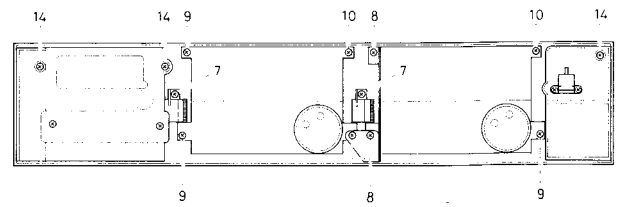
■ **Front plate**

1) Remove 3 screws (5) fastening the front plate from the bottom side.
2) Remove a screw (6) fastening the P.C. board.
3) Remove 3 screws (14) fastening the front plate.



■ **Mechanism assembly (A and B)**

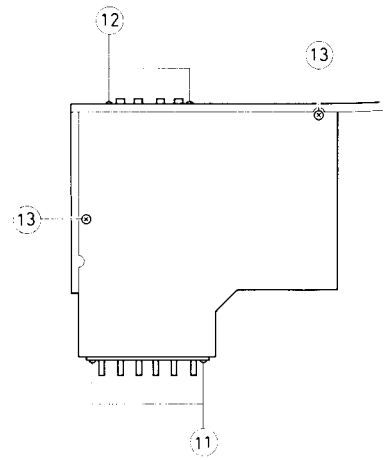
1) Press the eject button to open the cassette door. Slide off the cassette door upwards to unlock its pawls off both sides.
2) Remove the counter belt.
3) Remove 2 screws (7) fastening the damper holder.
4) Remove 3 screws (8) fastening the mechanism bracket.
5) Remove 5 screws (9) and (10) fastening the mechanism ass'y.



Tape counter

■ **P.C. board**

1) Remove 2 screws (11) fastening the push switch.
2) Remove 2 screws (12) fastening the pin jack ass'y.
3) Remove 2 screws (13) fastening the P.C. board.



Mechanical parts

- **Rec./PB head**
  1) Remove 2 screws (31) for the button assembly.
  2) Remove a screw (32) .
  3) Loosen a screw (33) for adjustment.
- **Erase head**
  1) Remove a screw (34) .
  2) Remove a screw (35) for adjustment.
- **Pinch roller arm assembly**
  1) Remove a stopper (36) holding its assembly, and pull it off from the shaft.
- **Supply reel disc assembly**
  1) Pull out the reel disc stopper (37) and remove its disc from the shaft.
- **Take-up reel disc**
  1) Pull out the reel disc stopper (38) and remove it from the shaft.

  Note: Remove the reel disc stoppers with a piece of sheet metal inserted between the reel disc and stopper, when assembling the reel disc, the stopper needs a new parts (the stopper cannot be used again).
- **Motor**
  1) Remove 3 screws (39) , (40) and (41) fastening the FM bracket. (When removing the FM bracket (42) , remove with the main belt (43) and the RF belt (44) .)
  2) Remove 3 screws (45) fastening the motor.
  3) Pull out the motor pulley from the motor shaft.

  Note: Be careful not to stain the main belt and RF belt. (When assembling the motor pulley, adjust the pulley position as next figure.)

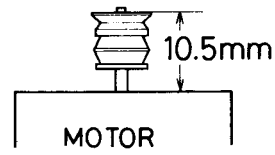


Fig. 9

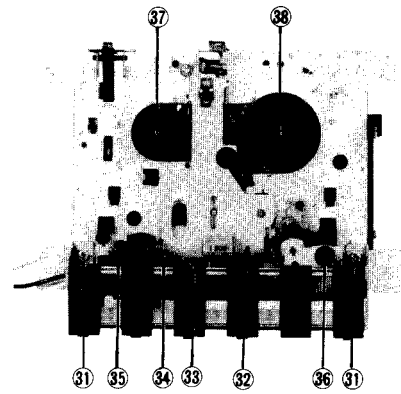


Fig. 10

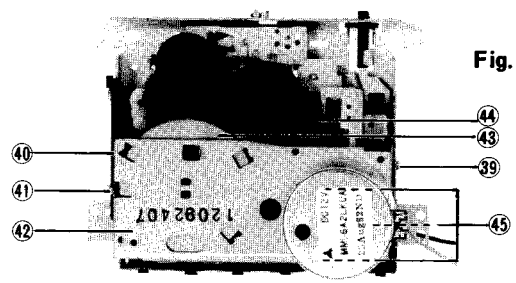


Fig. 11

- **Flywheel assembly**
  Pull out the flywheel from the capstan metal.

How to assemble the FM bracket and belts

1) Assemble full auto belt and RF belt as next figure.
2) Fasten 3 screws, to assemble the FM bracket.

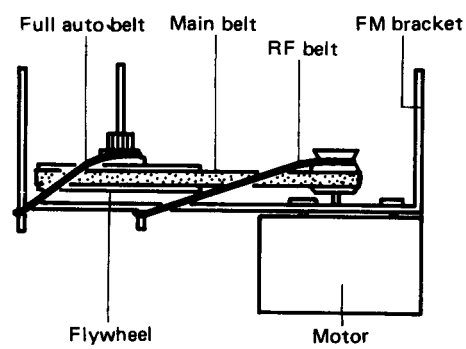


Fig. 12

Main Adjustments

[I] Equipment and measuring instruments used for adjustment

1. Electrical adjustment

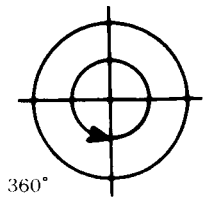
1) Electronic voltmeter
2) Audio frequency oscillator (range: 50—20 kHz and output 0 dB with impedance 600 Ω)
3) Attenuator
4) Standard tapes for REC/PB
   Maxell UD – SF tape
   TDK SA – SA tape
   JVC ME – Metal tape
   ┐
   ├— or equivalent
   ┘
5) Reference tapes for playback (JVC Test Tape)
   VTT703L (for head azimuth adj.)
   VTT712 (for motor speed, wow flutter adj.)
   VTT724 (for Reference Level 1 kHz) or VTT664
   TMT6447 (for music scanning)
   TMT6448 (for music scanning)
   VTT739 (for P.B. frequency response)
6) Resistors : 600 Ω (for attenuator matching)

2. Mechanical adjustment

1) Torque testing cassette gauge
2) Blank tape (C-120) for tape running checker.

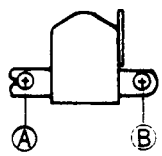
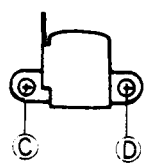
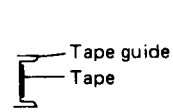
[II] Adjustment and repair of the mechanism

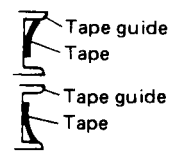
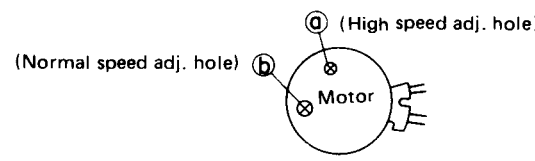
Tape-to-head contact adjustment



1. Turn the adjusting screw for aligning the erase head until it stops. Then, turn the screw in the reverse direction by 360° (a revolution).
2. Check the tape-to-head contact using a C-120 tape having pads.
3. Check it again with a Metal tape.
   Checking method:
   Record a 400 Hz or 1 kHz signal with 0 dB + 20 dB.
   Erase the recording. Checking if the erasing is satisfactorily performed.
4. After adjustment, apply screw bond on the adjusting screw to prevent its loosening.

(Adjust the mechanism or confirm that it is in normal operating condition prior to the adjustment of the electrical circuit.)

<table>
<tr><th>Item</th><th>Adjustment</th><th>Adjusting point</th><th>Standard value</th><th>Remarks</th></tr>
<tr><td>Adjusting record/playback head azimuth
 
</td><td>1. Connect an electronic voltmeter to the LINE OUT terminals.
2. Play back the VTT703L test tape.
3. Adjust the head angle with the screw Ⓐ until the reading of the electronic voltmeter becomes maximum for both channels.
4. After adjusting, set the screw with screw bond.</td><td>Screw Ⓐ</td><td>Maximum</td><td>If the head is worn, disconnected or exceedingly magnetized so as not to provide the necessary characteristics, replace it with a new one.
After replacement, the head position adjustment as well as the playback level adjustment, the bias current adjustment and the recording level adjustment are all necessary.
If the output difference between the left and right channels exceeds 3—4 db, the head is defective.
Replace it with a new one.</td></tr>
<tr><td rowspan="2">Adjusting erase head height
 
</td><td rowspan="2">Turn the screw Ⓓ for aligning the erase head until it stops. Then, turn the screw in the reverse direction by 180° (a ½ revolution).
Employ a special cassette (C-120) from which parts of the casing, where the erase head, record/playback head and capstan engage, has been cut away. Perform tape transport with the cassette tape. Adjust the screw Ⓒ until the tape runs in the center of the erase head tape guide.</td><td>Screw Ⓒ Ⓓ</td><td></td><td>Be sure to perform this adjustment after replacing the erase head.</td></tr>
<tr><td colspan="3">Correct
 

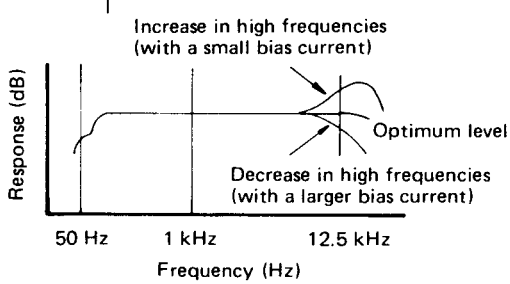
Incorrect
 
</td></tr>
<tr><td>Adjusting motor speed</td><td>1. Connect a speed meter (an electronic counter) to the LINE OUT terminals. Play back the VTT712 test tape.
2. High speed adj.
Connect the H. SP terminal (or Cathodes of D834 and D835) to the ground.
Adjust the semi-fixed resistor ⓐ in the motor until the reading of the speed meter is 6000 Hz.
3. Normal speed adj.
Adjust the semi-fixed resistor ⓑ in the motor until the reading of the speed meter is 3000 Hz.
 
</td><td>Semi-fixed resistor in the motor</td><td>Ⓐ 6030 Hz
3015 Hz
Ⓑ 6000 Hz
3000 Hz</td><td>If the speed meter functions as a wow and flutter meter, also, connect the deck to the INPUT terminals of the meter.</td></tr>
</table>

Item	Adjustment	Adjusting point	Standard value	Remarks
Checking wow and flutter	Connect a wow and flutter meter to LINE OUT terminals. Play back the VTT712 test tape. Check to see if the reading of the meter is within 0.24% (CCIR WTD).			If the reading becomes moving value even if conforming to the standard, a reclaim may be raised. Repairs are necessary.
Checking playback torque	Employ a torque testing cassette tape for the checking.		40—70 gr-cm	If the standard torque is not obtained, replace the take-up disc assembly.
Checking fast forward torque	Measure the torque in the fast forward mode in the same manner as in the above.		More than 80 gr-cm	If the standard torque is not obtained, perform the following. 1. Clean the capstan belt, the motor pulley, the take-up reel disck circumference, the flywheel circumference, etc. 2. Replace the belt.
Checking rewind torque	Measure the torque in the rewind mode in the same manner as in the above.		More than 80 gr-cm	If the standard torque is not obtained, clean the capstan belt, motor pulley, flywheel circumference, supply reel disc circumference, etc.

[III] Electrical circuit adjustment procedure

In the steps marked by an asterisk (*), adjustment should be performed, however, only checking is sufficient with steps other than those.

Adjustment should be performed in the order of steps, 1, 2, 3, ... Perform this adjustment with the NR switch set to OFF.

Step	Item	Adjustment	Adjusting point	Standard value	Remarks
1*	Adjusting playback level	1. Play back the VTT724 Reference tape (1 kHz) with the tape select switch set to the SF/NORM position. 2. Adjust VR104, VR204, or VR102, VR202 until the LINE OUT becomes about −8 dBs.	[A] VR104, 204 [B] VR102, 202	−8 dBs	This adjustment becomes necessary when a change in playback level results (for exarnple, due to head replacement).
2*	Playback frequency response	Play back test tape VTT739 (1 kHz, 10 kHz) for following adjustment. 1. Adjust VR103, 203 or VR101, 201 so that 10 kHz signal and 1 kHz signal gains become +1.5 dB.	[A] VR103, 203 [B] VR101, 201	Reference frequency 1 kHz +1.5 ± 2dB at 10 kHz	Tape select switch is NORM position.
3*	Checking record/ playback frequency response	Record 1 kHz, 50 Hz and 12.5 kHz signals at an input level of 0 dB to −20 dB. Play back the tape. Check to see that the 50 Hz and 12.5 kHz signal output deviations fall within the standard range, using the 1 kHz signal output as a reference. 	VR152, 252	Reference frequency; 1 kHz 0 ± 3 dB at 50 Hz 1 ± 0.5 dB at 12.5 kHz	This checking should be performed for normal tape and for both right and left channels. 1. Bias current adjustment for a cassette deck should generally be performed referring to the record/playback frequency response. This is because the frequency response of a cassette deck depends more greatly upon the bias current than does that of an open reel deck. The current measuring method described below is an alternative one. 2. If the bias current is not properly adjusted, the record and playback characteristics become as shown left.
	Note: After adjusting recording level, check record/playback frequency response at NR switch ON. If 50 Hz and 12.5 kHz output deviations are 0 ± 4 dB or more, adjust it again. (When adjusting this item, can not monitor the signal at NR switch ON.)				

Step	Item	Adjustment	Adjusting point	Standard value	Remarks
4	Adjusting recording level	1. Apply a 1 kHz, approx. −10 dB signal to the LINE IN terminals. Adjust the recording level controls until the signal is available at −8 dBs at the LINE OUT terminals. 2. After checking to see if the Peak level indicator becomes 0, record the signal applied to both left and right channels using normal tape. 3. Play back the recording part. Perform the recording signal adjustment with VR151 and VR251 so that the LINE OUT becomes −8 dBs.	VR151, 251	−8 dBs ±1.5 dB	The level difference between left and right channels for NORMAL tape and metal tape should be less than 1 dB. Perform the adjustment using a normal tape, level difference between recording and playback for metal tape, should be less than 1.5 dB, and that between left and right channels should also be less than 1 dB.
5	Checking record/ playback signal distortion	1. Record a 1 kHz, −8 dBs signal to LINE IN terminals and perform recording with the peak level indicator becomes 0. 2. Play back the recorded part. Check the output with a distortion meter to see if the value conforms to the standard value.		NORM tape; Less than 2.0% CrO_2 tape; Less than 3% Metal tape; Less than 2%	Be sure to perform this adjustment following bias current and recording level adjustments.
6	Checking signal to noise ratio in recording/playback	1. Record a 1 kHz, −8 dBs signal. Stop the input by disconnecting from the terminal to perform non-signal recording. 2. Play back the recorded part. Measure the −8 dBs recording output and the non-signal recording output for comparison using an electronic voltmeter. Check to see if the value conforms to the standard value.		NORM, and CrO_2 tapes; More than 42 dB	Apply an output (−72 dBs) to the MIC terminals with the recording level controls set to maximum so that the Line out level becomes −8 dBs.
7	Checking erasing coefficient	1. Apply a 1 kHz signal to the LINE IN terminals. Adjust the recording level controls until the LINE OUT becomes −8 dBs. 2. Perform recording with the signal enhanced by 20 dB. 3. Erase a part of the recording. 4. Measure the output difference between the erased part and non-erased part to compare with an electronic voltmeter.		More than 65 dB	For the measuring, connect a band pass filter between the deck and the electronic voltmeter. Input (1 kHz 0 dB + 20 dB) → Tape deck (recording erasing) Band pass filter (1 kHz) → Electronic voltmeter
8	Checking Music scan	Using a TMT-6447, the music scan mechanism does function, and using TMT-6448, the music scan mechanism does not function.			

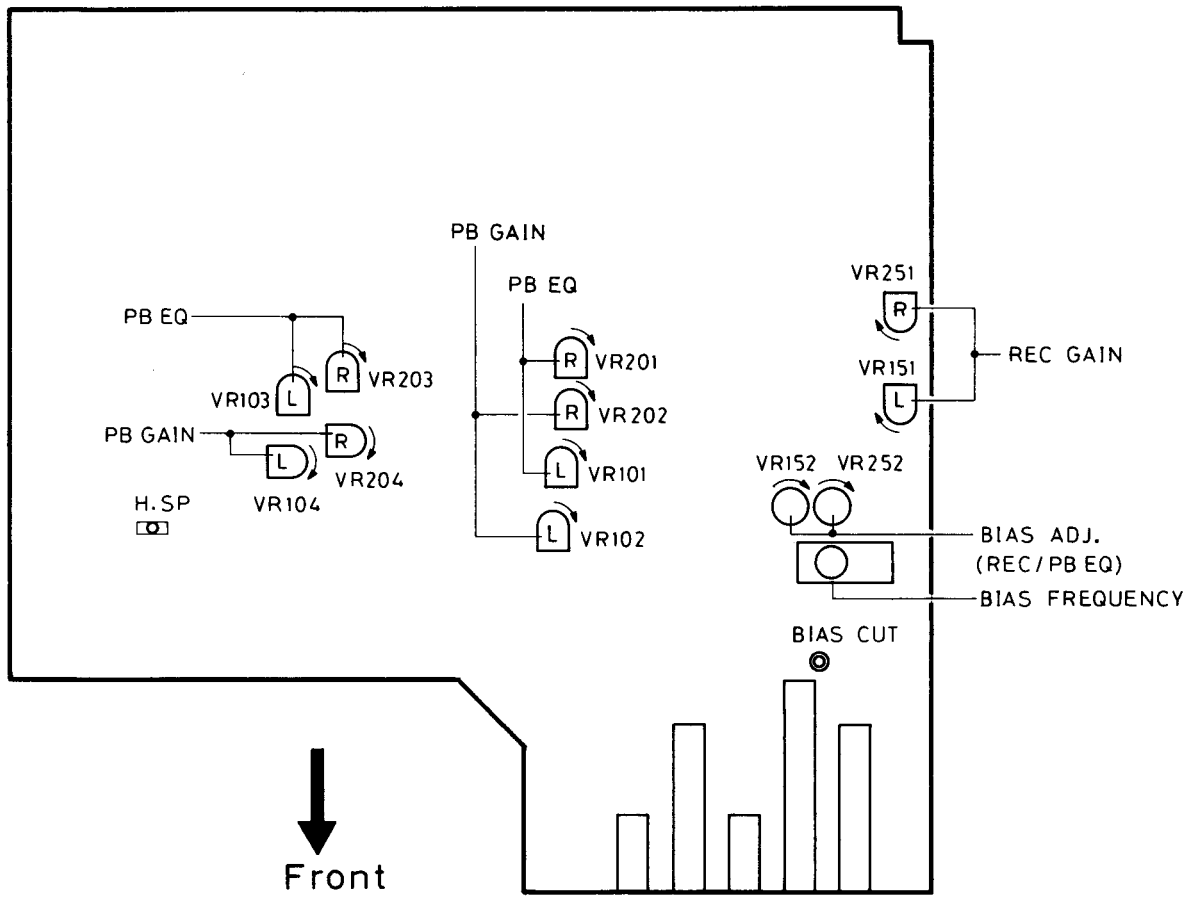
note

	Continuous play	After setting the CONTI switch of mechanism [A], press the PB button of mechanism [B] and confirm that mechanism [B] is in the PB mode when mechanism [A] is set to the Stop mode.
	Double-spped operation	Confirm that mechanism does not enter the double-speed mode even when the double-speed switch is set to ON except during the dubbing mode.

[IV] Electrical adjustment location

Main amp. P.W. board (parts ass'y side view)

Turning in the direction of the arrow increases the level.



Electrical Operation

A / B switching (PB.signal)

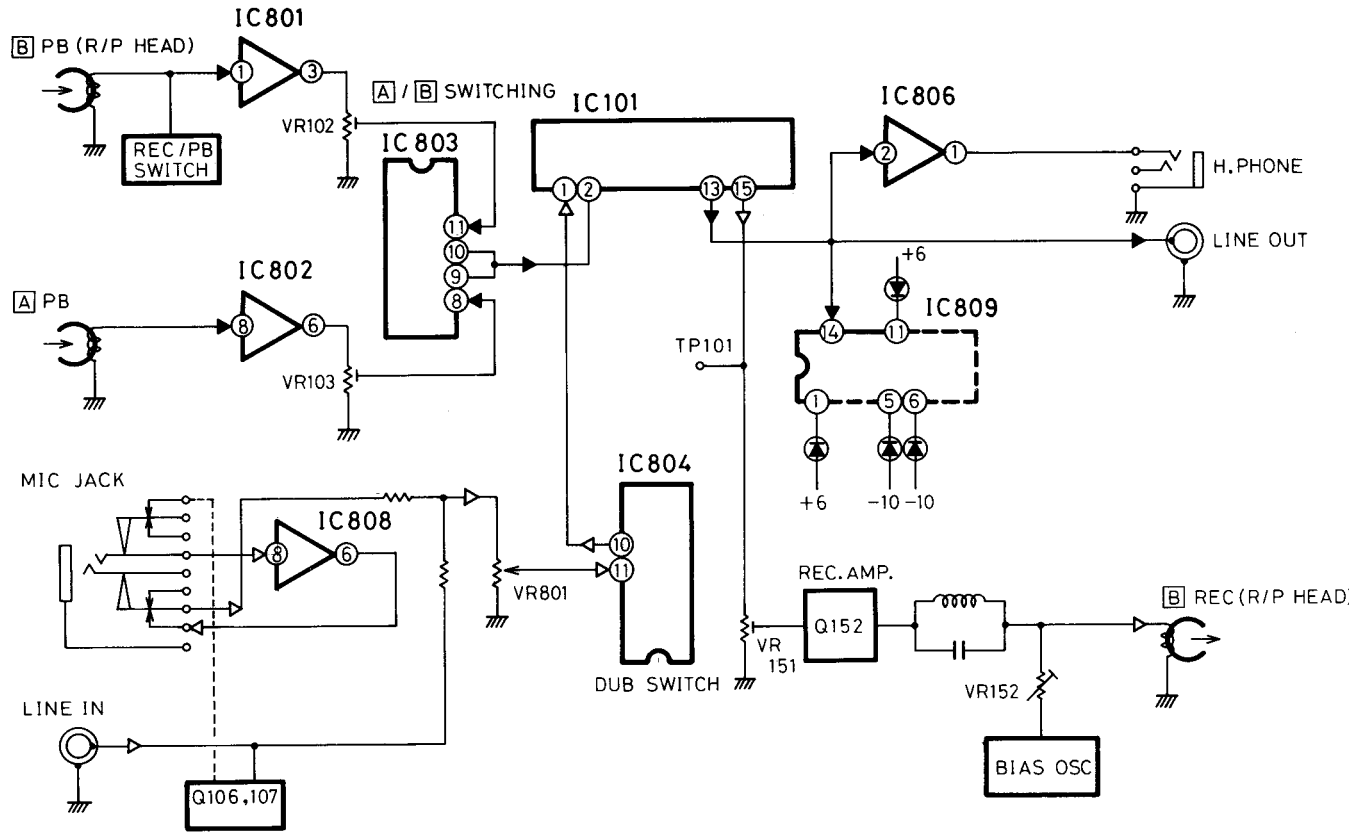
1. During the operation of mechanism B, the Mute switch (MS4) is kept closed.
   ↓
   Q805 becomes OFF and IC803 terminal (12) becomes H level, then the switches (10) and (11) are closed.
   ↓
   Mechanism B signal circuit is switched on.
2. The operation of Q805 is OFF.
   ↓
   The operation of Q804 is ON.
   ↓
   IC803 pin (6) is L level and the circuits of (8) and (9) are switched off.
   The operation of mechanism B permits the signals of mechanism B to have priority over mechanism A for circuit connection.

Dubbing operation

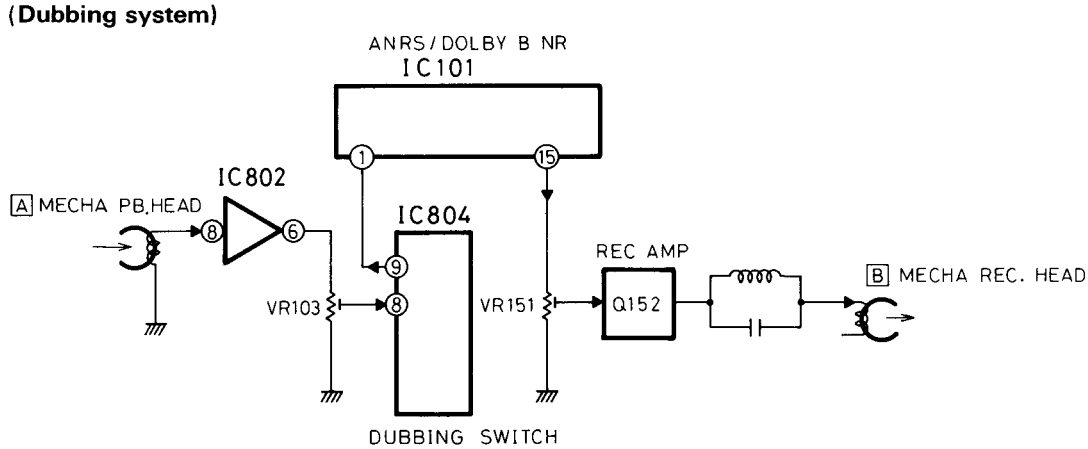
Mechanism A is in the PB mode and B is in the recording mode.
↓
The Mute switches (MS1 and MS4) become ON and REC switch (MS3) becomes ON.
↓
The base of Q809 becomes H level and Q809 is ON (collector is L level).
↓
Q807 becomes OFF and IC's of (5) and (6) become H level, then switches (8) and (9) are closed.
↓
The playback signals of mechanism A pass through terminal (9) and are connected to the recording signal circuit of mechanism B.
In addition, Q806 becomes ON and terminal (12) becomes L level, then switches of (10) and (11) are opened. (The recording input signals are switched off.)

Block Diagram

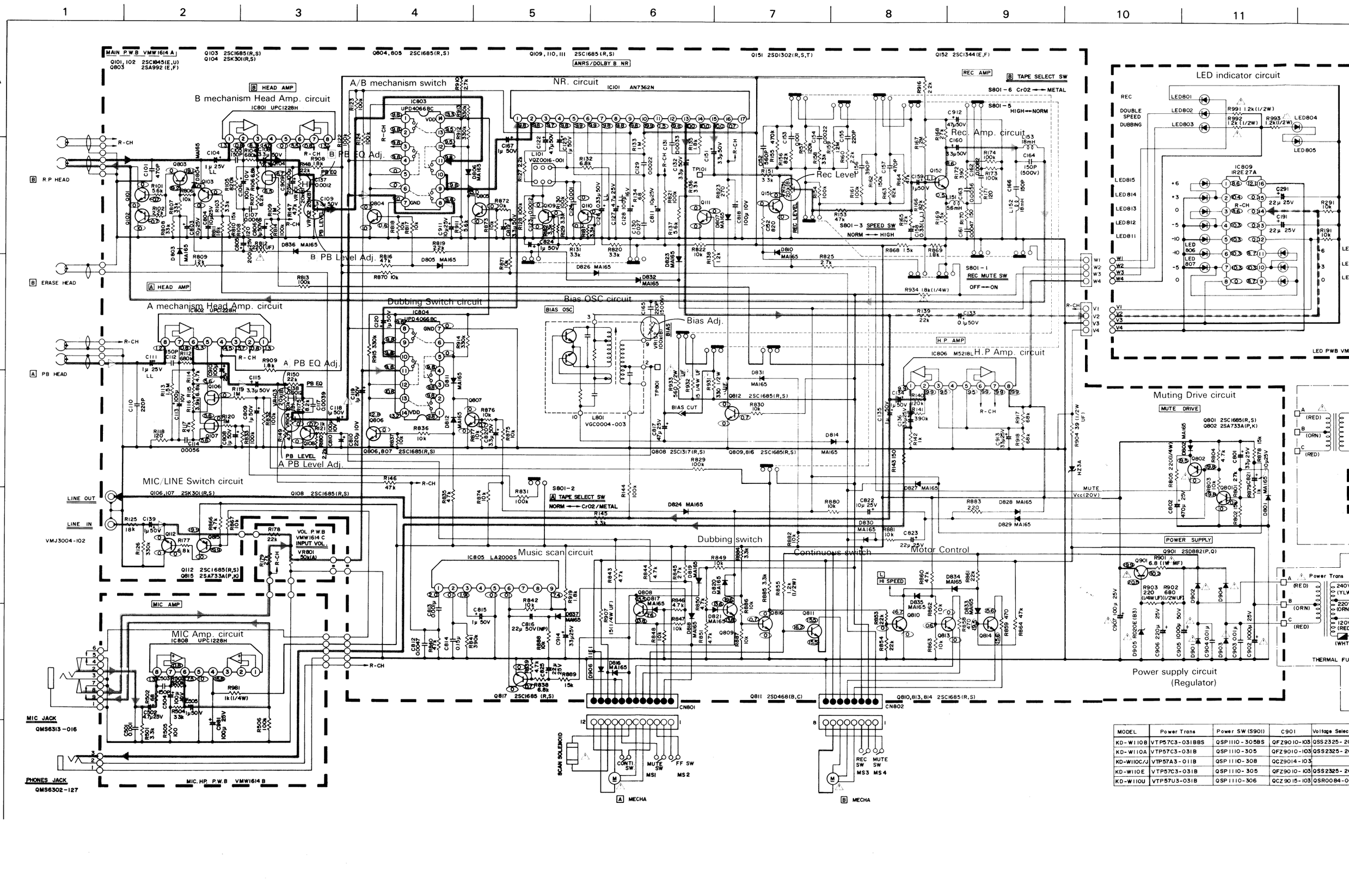
(PB/Rec system)



(Dubbing system)



Standard Schematic Diagram



MODEL	Power Trans	Power SW (S901)	C901	Voltage Select SW	F
KD-W110B	VTP57C3-031BBS	QSP1110-305BS	QFZ9010-103	QSS2325-203BS	QM
KD-W110A	VTP57C3-031B	QSP1110-305	QFZ9010-103	QSS2325-203	QM
KD-W110C/J	VTP57A3-011B	QSP1110-308	QCZ9014-103		QM
KD-W110E	VTP57C3-031B	QSP1110-305	QFZ9010-103	QSS2325-203	QM
KD-W110U	VTP57U3-031B	QSP1110-306	QCZ9015-103	QSR0084-001	QM

5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16

Q109, 110, 111 2SC1685(R,S)
Q151 2SD1302(R,S,T)
Q152 2SC1344(E,F)

ANRS/DOLBY B NR

NR. circuit
IC101 AN7362N

REC AMP

B TAPE SELECT SW
S801-6 CrO2 → METAL

S801-5 HIGH → NORM

Rec. Amp. circuit

Rec Level

S801-3 SPEED SW
NORM → HIGH

S801-1 REC MUTE SW
OFF → ON

Bias OSC circuit
BIAS OSC
Bias Adj.

H.P AMP
IC806 M5218L H.P Amp. circuit

S801-2
A TAPE SELECT SW
NORM → CrO2/METAL

Dubbing switch
Continuous switch
Motor Control

Music scan circuit

Muting Drive circuit
MUTE DRIVE
Q801 2SC1685(R,S)
Q802 2SA733A(P,K)
MUTE
Vcc(20V)

POWER SUPPLY
Q901 2SD882(P,Q)
Power supply circuit
(Regulator)

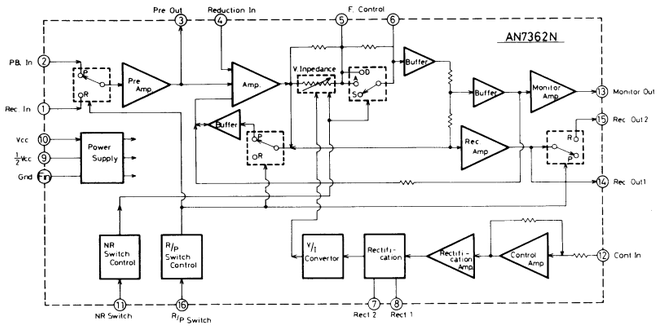
Q811 2SD468(B,C)
Q808,809,816 2SC1685(R,S)
Q810,813,814 2SC1685(R,S)
Q812 2SC1685(R,S)
Q808 2SC1317(R,S)

CN801
CN802

SCAN SOLENOID
CONTI SW
MUTE SW
FF SW
MS1
MS2
REC SW
MUTE SW
MS3
MS4
A MECHA
B MECHA

LED indicator circuit
REC
DOUBLE SPEED DUBBING
LED801
LED802
LED803
LED804
LED805
LED808
LED809
LED810
LED811
LED812
LED813
LED814
LED815
IC809 IR2E27A
LED 806
LED 807
LED PWB VMW3573

IC 101, 201 AN7362N



Power Trans VTP57U3-031B
Voltage Select SW QSR0084-001
Power Cord QMP7600-200
Power SW (S901) QSP1110-306
C901 QCZ9015-103
W110U AC240/220/120/100V 50/60Hz
VMW4667-001
KD-W110U

KD-W110J/C

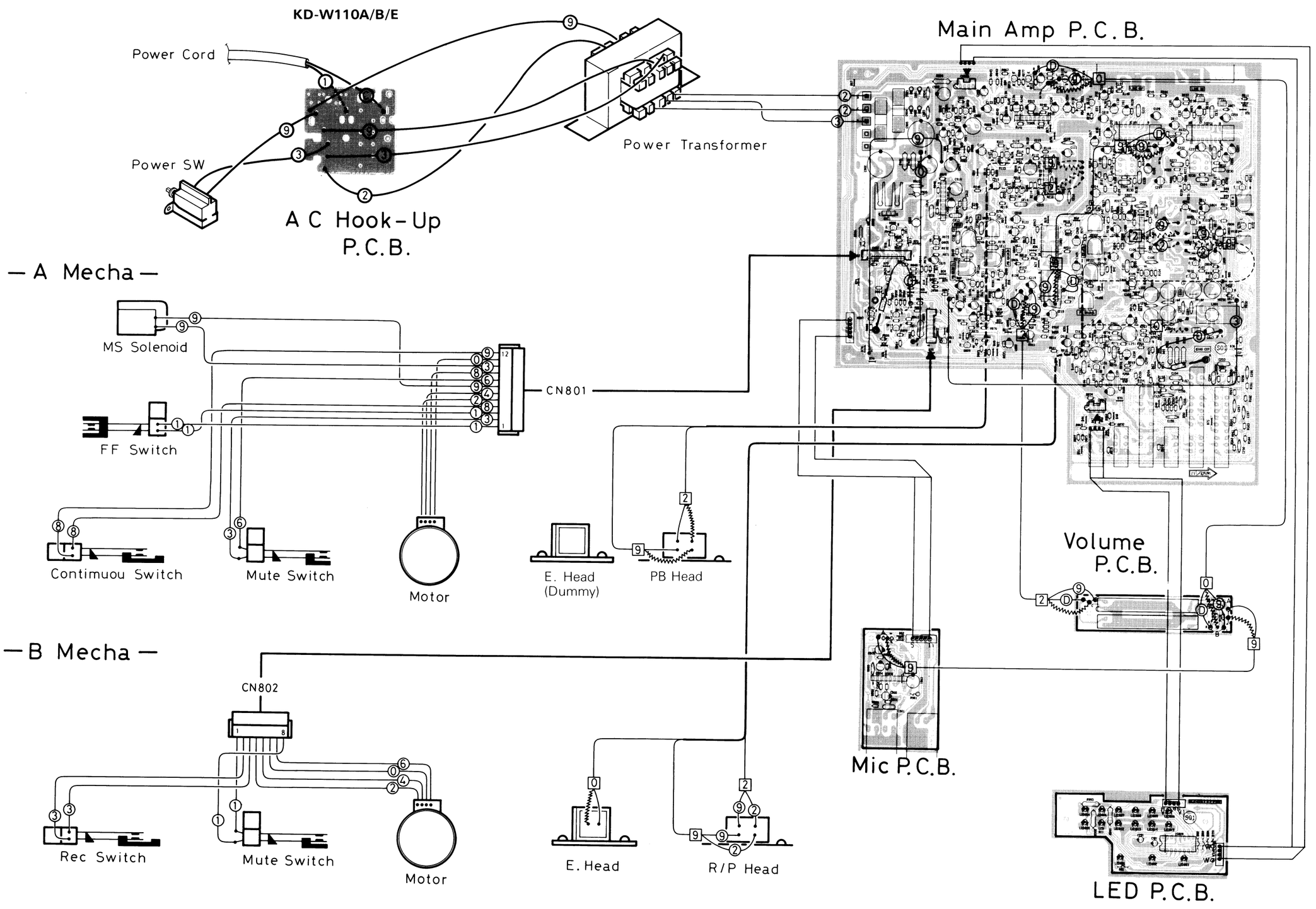
VMW4680-001
Voltage Select SW S902
Power Cord
THERMAL FUSE 130°C
KD-W110B/A/E AC240/220/120V 50/60Hz
S901 Power SW

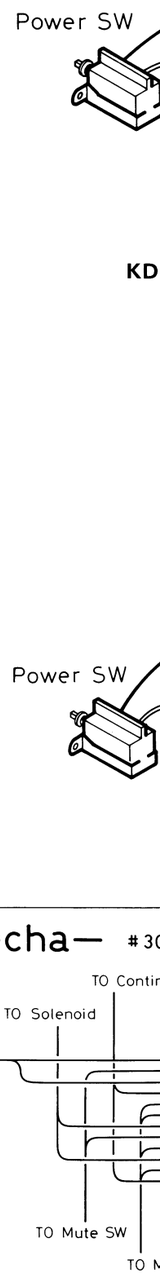
MODEL	Power Trans	Power SW (S901)	C901	Voltage Select SW	Power Cord
KD-W110B	VTP57C3-031BBS	QSP1110-305BS	QFZ9010-103	QSS2325-203BS	QMP9017-008BS
KD-W110A	VTP57C3-031B	QSP1110-305	QFZ9010-103	QSS2325-203	QMP2560-200
KD-W110C/J	VTP57A3-011B	QSP1110-308	QCZ9014-103		QMP1200-200
KD-W110E	VTP57C3-031B	QSP1110-305	QFZ9010-103	QSS2325-203	QMP3900-200
KD-W110U	VTP57U3-031B	QSP1110-306	QCZ9015-103	QSR0084-001	QHP7600-200

Blue line shows the signal at playback.
Red line shows the signal at recording.
+B circuits.

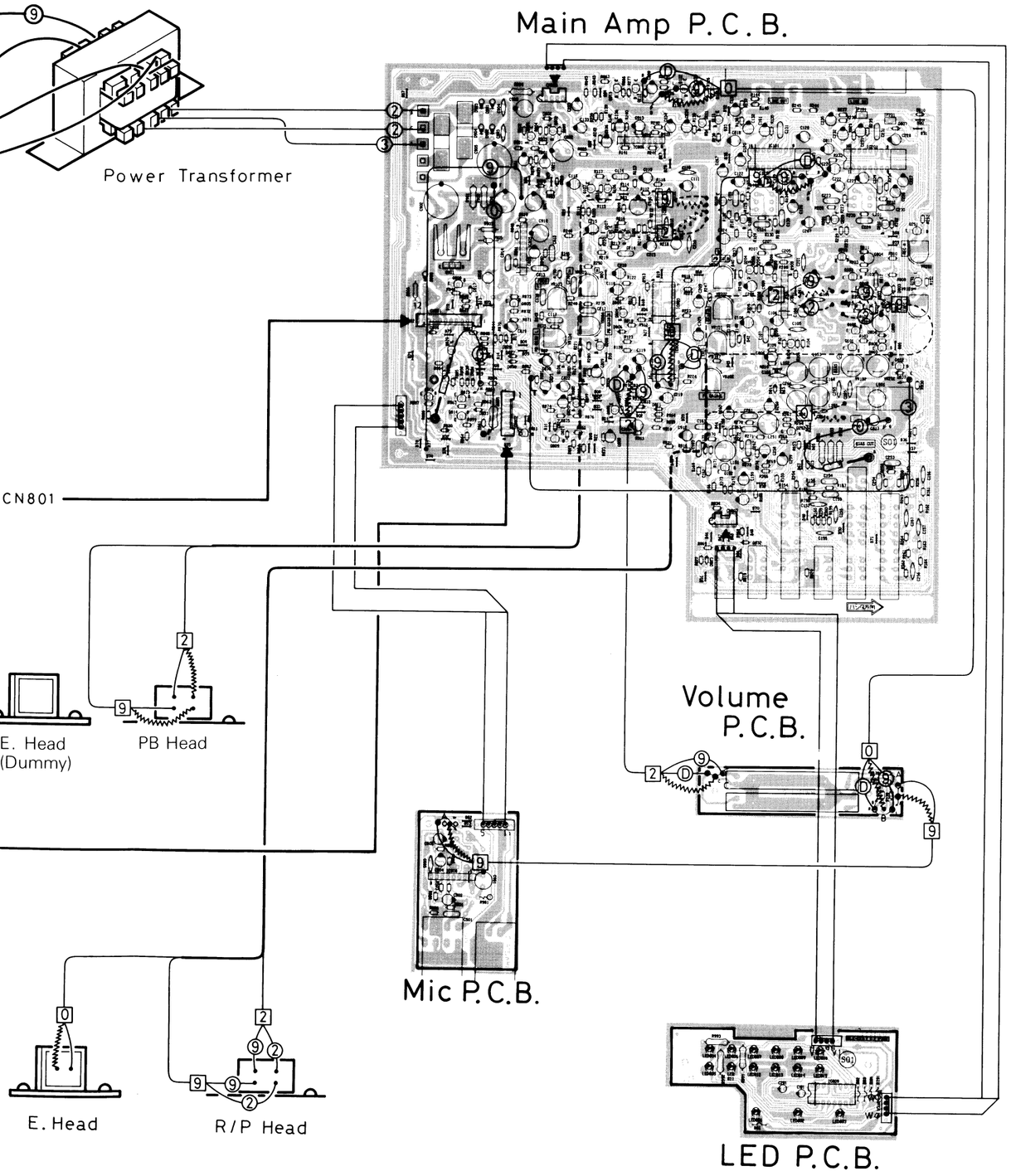
⚠ Parts are safety assurance parts.
When replacing those parts, make sure to use the specified one.

Wiring Connections

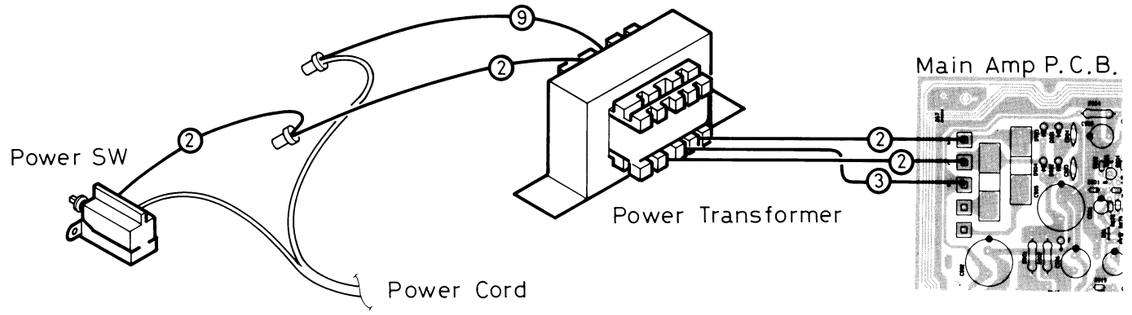




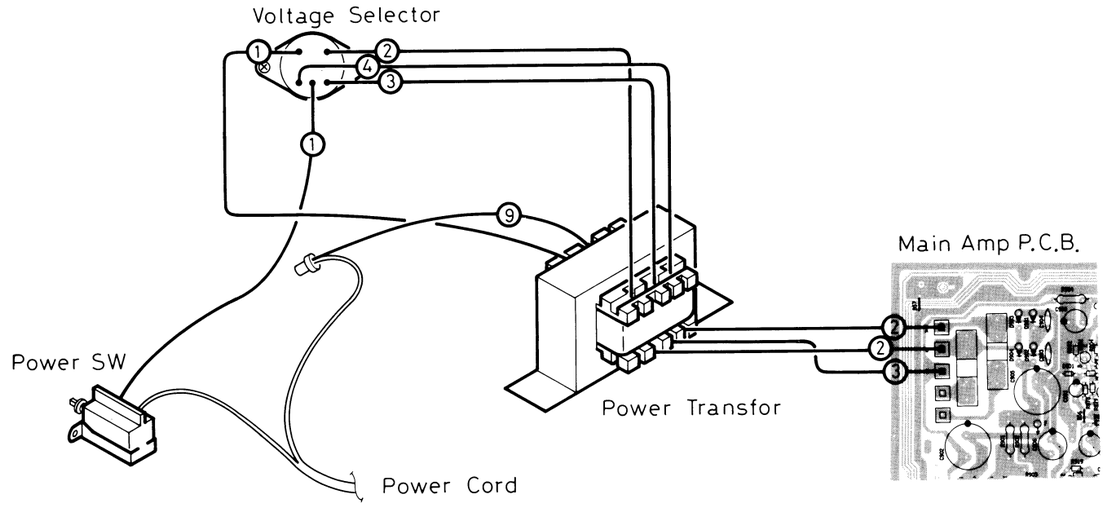
KD-W110A/B/C/E/J/U/E/NA NC/NJ/NU/NE	KD-W110A/B/C/E/J/U/E/NA NC/NJ/NU/NE

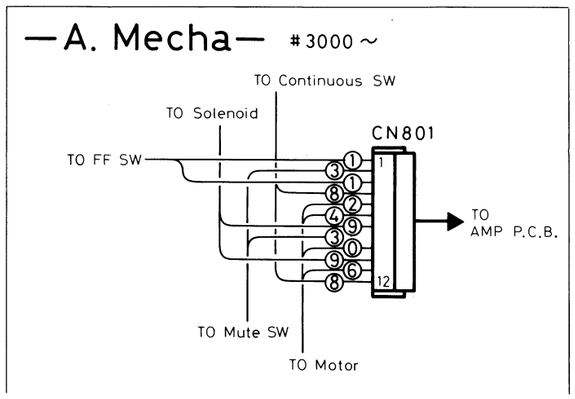


KD-W110C/J



KD-110U



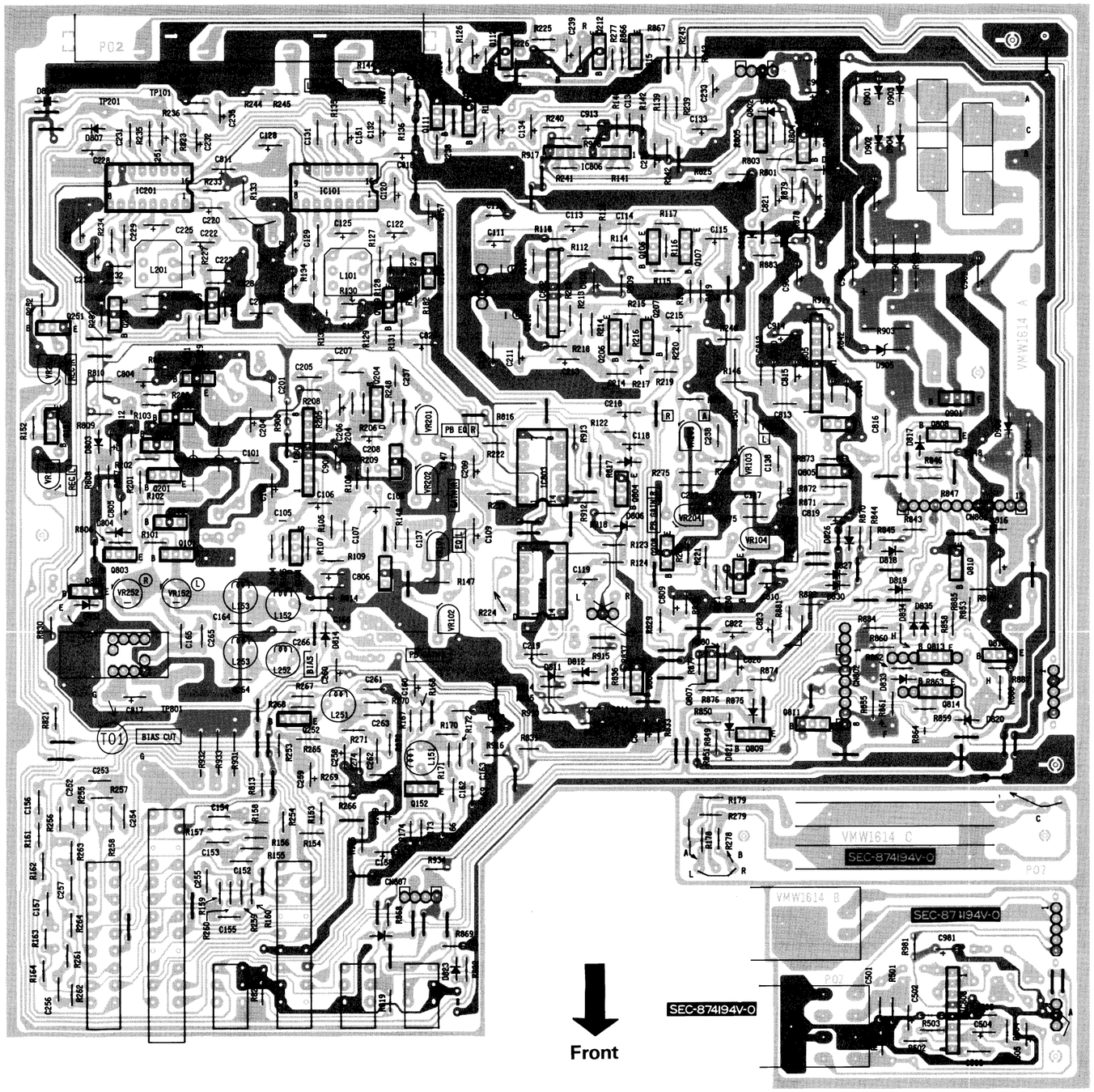


Color code are shown below

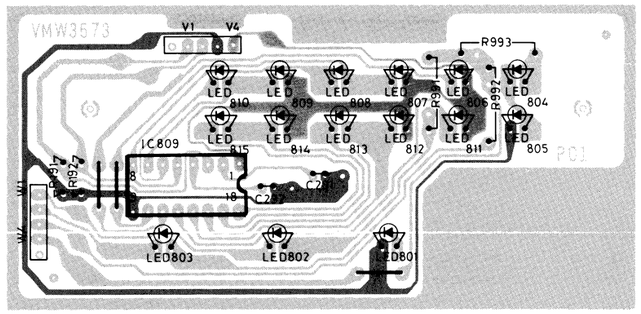
1	Brown
2	Red
3	Orange
4	Yellow
5	Green
6	Blue
7	Violet
8	Grey
9	White
0	Black
C	Light Blue
D	Pink

Location of P.C. Board Parts

Main P.C. Board



LED indicater P.C.Board



Volume P.C. Board

Mic amp. P.C. Board

+B
Earth
Transistor and ICS

KD-W110A/B/C/E/J/U/E/NA
NC/NJ/NU/NE

P.C. Board Parts List

⚠ parts are safety assurance parts.
When replacing those parts, make sure to use the specified one.

Ref. No.	Parts No.	Parts Name	Remarks
IC101, 201	AN7362N	I.C.	
IC805	LA2000S	"	
IC806	M5218L	"	
IC801, 802, 808	UPC1228H	"	
IC803, 804	UPD4066BC	"	
⚠ Q802, 815	2SA733A(P,K)	Transistor	
Q803	2SA992(E,F)	"	
Q808	2SC1317(R,S)	"	
Q152, 252	2SC1344(E,F)	"	
Q103, 108, 109–112, 203, 208, 209–212,	2SC1685(R,S)	"	
801, 804, 805–807, 809, 810, 812–814, 816, 817			
Q101, 102, 201, 202	2SC1845(E,U)	"	
Q151, 251	2SD1302(R,S,T)	"	
Q811	2SD468(B,C)	"	
⚠ Q901	2SD882(Q,P)	"	
Q104, 106, 107, 204, 206, 207,	2SK301(R,S)	"	
D907	HZ3A	Si. Diode	
D801–807, 810–812, 814, 816, 817–821, 823, 824, 826–837	MA165	"	
⚠ D905	RD20E(B3)	Ze. Diode	
⚠ D901–904, 906	11E1-TB2	Si. Diode	
VR152,252	QVP4A0B-104	V. Resistor	
VR101–104, 151,201, 202–204, 251	QVZ1802-223	"	
VR801	QVZ6301-001	"	
CN806,807	E04365-004	Plug	
CN802	QMV5005-008	Connector	
CN801	" -012	Plug	
L801	VGC0004-003	Osc. Coil	
L152, 153, 252, 253, L151, 251	VQP0001-183	Inductor	
	" -562	"	
L101, 201	VQZ0016-001	Filter	
R855, 902, ⚠ 904, 931, ⚠ 933	QRD121J-	C. Resistor	
R152, 165, 252, 265,	QRD141J-	"	
505, 805, 812, 823, 883, 903, ⚠ 932, 934, 981			

Ref. No.	Parts No.	Parts Name	Remarks
R101–109, 112–151, 153–164, 166–175, 177–182,	QRD161J-	C. Resistor	
201–209, 212–251, 253–264, 266–275, 277–283,			
501–504, 506, 801, 802–804, 806–811, 813, 814,			
816–822, 825, 829, 830–833, 835–851, 853, 854,			
858–864, 866–882, 884–889, 908–919			
R906	QRG019J-	OMF. Resistor	
⚠ R901	QRX019J-6R8	"	
C903, 904	QCF11HP-103	C. Capacitor	
C101, 105, 110, 112,	QCS11HJ-	"	
152, 155, 156, 157, 166, 201, 205, 210, 212, 252,			
255–257, 266, 503			
C164, 165, 264, 265	QCS12HJ-	"	
C127, 227, 502	QEB41EM-	E. Capacitor	
C104, 111, 126, 158, 204, 211, 226, 258	QEB41HM-	"	
C816	QEN41HA-	"	
C106, 113, 206, 213, 504, 810, 818	QET41AR-	"	
C906	QET41EM-	"	
C128, 136, 228, 236, 801–805, 811, 817,	QET41ER-	"	
821–823, ⚠ 825, 902, ⚠ 907, 909, 910–914, 981			
C108, 109, 115, 118, 119, 120, 122, 125, 132–135,	QET41HR-	"	

Ref. No.	Parts No.	Parts Name	Remarks
C139, 151, 159, 160, 167, 208, 209, 215, 218–220,	QET41HR-	E. Capacitor	
222, 225, 232–235, 239, 251, 259, 260, 267, 505,			
806, 808, 809, 815, 819, 820,			
⚠ 824, 905			
C107, 114, 117, 123, 124, 129, 130, 131, 137, 138, 153, 154,	QFN41HJ-	M. Capacitor	
161–163, 207, 214, 217, 223, 224, 229, 230, 231,			
237, 238, 253, 254, 261–263, 501, 812, 813			
	QMS6313-016	Jack	MIC(gray)
	QMS63102-127	Jack	H.phone(gray)
	QST1641-V01	Push sw ass'y	
	VMH4003-001	Heat sink	
	QMS6313-017	Jack	MIC(BLK)

Ref. No.	Parts No.	Parts Name	Remarks
C814	QFV41HJ-	F. Capacitor	
(LED P.C. Board)			
	VMW3573-001	P.C. Board	
LED808~810	GL-9PR72	LED	Red
LED813~815 LED801			
LED802~807	GL-9EG792	LED	Green
LED811~812			
IC809	IR2E27A	IC	
R191,291	QRD141J-	C. Resistor	
⚠ R991~993	QRD121J-	C. Resistor	
C191,291	QEK71AM-	E. Capacitor	
	QSS2325-203	S. Switch	KD-W110A/E /NA/NE
	QSS2325-203BS	S. Switch	KD-W110B/NB
	QSR0084-001	V. Select	KD-W110U/NU
	QMS6302-122	Jack	H.phone(BLK)

Parts Comparison Table bettween Black Type and Silver Type. (Refer see page 19)

	Ref.No.	Silver Type Parts No.	Qty	Black Type Parts No.	Qty	Parts Name
	2	E70913-002	1	E70913-001	1	JVC Mark
	11-2	VJD4782-001	1	VJD4782-003	1	Lid cover
	11-1—11-2	ZCKDW110Y-CSA	1	ZCKDW110NY-CSA	1	Lid Ass'y
	12-1—12-2	ZCKDW110Y-CSB	1	ZCKDW110NY-CSB	1	Lid Ass'y
	12-2	VJD4782-002	1	VJD4782-004	1	Lid cover
	22-1	VXP3094-013	1	VXP3094-19	1	Mecha push Button
	22-2	" -014	1	" -20	1	"
	22-3	" -015	1	" -21	1	"
	22-4	" -016	1	" -22	1	"
	22-5	" -017	1	" -23	1	"
	22-6	" -018	1	" -24	1	"
	23	VXP4392-002	1	VXP4392-003	1	"
	26	VJC1257-002	1	VJC1257-003	1	Top cover
	27	VKZ3001-002	1	VKZ3001-004	1	Special screw
	28	SDST3006R	2	SDST3006N	2	Screw
	36	VKS3193-001	2	VKS3193-002	2	Volume Lever
	38	VJD4780-001	1	VJD4780-002	1	Blind
	39	VXP4216-002	6	VXP4216-003	6	Push Knob
	40	VXP3108-001	1	VXP3108-002	1	Power Knob

Parts List of Enclosure Assembly

⚠ parts are safety assurance parts.
When replacing those parts, make sure to use the specified one.

⚠	Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
	1	VJC1343-001	Front Panel	KD-W110A/B/C/E/U	1
	"	" -002UL	"	KD-W110J	1
	2	E70913-002	Mark		1
	3	TFB313563-02	Plate Nut		3
	4	VKC5176-001T	Tape Counter		1
	5	VKB3000-059	Counter Belt		1
	6	SDSF2605Z	Screw	Counter	2
	7	VJK4213-001	Finder		1
	8	VJD4781-001	Indicator Plate		1
	9	VYH4054-00C	Damp Gear Ass'y		2
	10	SDSF3012Z	Screw		2
	11-1—11-2	ZCKDW110Y-CSA	Lid Ass'y	A : Mecha.	1
	11-1	VJT3110-002	Cassette Lid		1
	11-2	VJD4782-001	Lid Cover		1
	12-1—12-2	ZCKDW110Y-CSB	Lid Ass'y	B : Mecha.	1
	12-1	VJT3110-002	Cassette Lid		1
	12-2	VJD4782-002	Lid Cover		1
	13	VJT2083-001	Cassette Holder		2
	14	VKY4295-001	Spring		4
	15	VKY4252-001	"		2
	16	VKW4397-002	Holder Spring		2
	17	VYSR103-014	Spacer		1
	18	VJD3401-003	Mecha. Plate		2
	19	SDST2604Z	Screw		4
	20	VKL5536-001	Bracket		1
	21	SDST3006Z	Screw		1
	22-1	VXP3094-013	Mecha. Push Button	REC	1
	22-2	" -014	"	PLAY	2
	22-3	" -015	"	FF	2
	22-4	" -016	"	REW	2
	22-5	" -017	"	STOP/EJECT	2
	22-6	" -018	"	PAUSE	1
	23	VXP4392-002	"	CONTINUOUS PLAY	1
	24	SDSF3012Z	Screw		3
	25	SSSF3010Z	"		5
	26	VJC1257-002	Top Cover		1
	27	VKZ3001-002	Screw		4
	28	SDST3006R	"		2
	29	VYSR1R5-004	Spacer		1
	30	VKL1228-001	Bottom Cover		1
	31	VJF4003-002	Foot		4
	32	SDSB3010R	Screw	Bottom Cover	3
	33	SDST3006Z	"	"	6
	34	SDSF3014Z	"	Holder (L) & (R)	3
	35	SSSF3010Z	"		3
	36	VKS3193-001	Volume Lever		2
	37	VXS4072-001	Slide Knob		2
	38	VJD4780-001	Blind		1
	39	VXP4216-002	Push Knob		6
	40	VXP3108-001	Power Knob		1
	41	VYN2123-002PA	Name Plate	KD-W110B	1
	"	" -003PA	"	KD-W110A	1
	"	" -004PA	"	KD-W110C	1
	"	" -005PA	"	KD-W110E	1
	"	" -006PA	"	KD-W110J	1
	"	" -007PA	"	KD-W110U	1
	"	" -008PA		KD-W110ED	1
	42	VJD3459-001	Holder (L)		1
	43	VKL5467-001	Shield Plate		1
	44	SDSF3008Z	Screw	Shield Plate	1
	45	SDST3006Z	"	Power SW	2

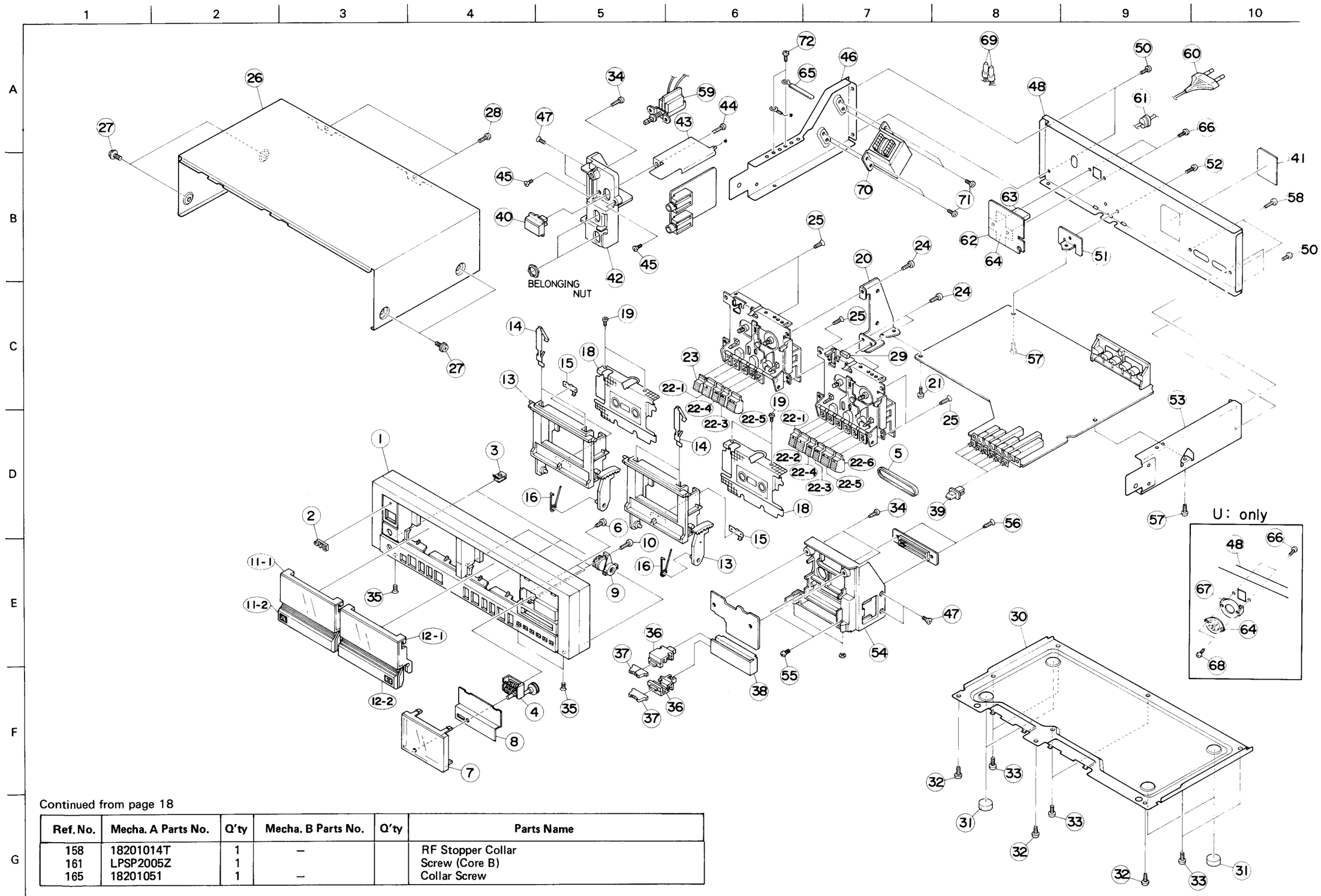
⚠	Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
	46	VKL3424-001	Amp. Chassis (L)		1
	47	SSST3006Z	Holder (L) & (R)		4
	48	VJC1258-008	Rear Panel	KD-W110B/A/E/U	1
	"	" -009	"	KD-W110C/J	1
	50	SDST3006R	Screw	Chassis (L) & (R)	4
	51	VKL5337-001	Joint Bracket	PWB : Rear Panel	1
	52	SDST3006R	Screw	Bracket : Rear Panel	1
	53	VKL3425-001	Amp. Chassis (R)		1
	54	VJD2223-001	Holder (R)		1
	55	SDST3006Z	Screw	T. Select SW	2
	56	SDSF3010F	"	Slide Volume	2
	57	SDST3006Z	"	Main PWB : Amp. Chassis	3
	58	SDSF3010R	"	Pin Jack Ass'y	2
⚠	59	QSP110-305BS	Push Switch	S901 KD-W110B (POWER)	1
⚠	"	QSP1110-305	Power Switch	KD-W110A/E/NA/NE	1
⚠	"	" -308	Push Switch	KD-W110C/J/NC/NJ (POWER)	1
⚠	"	" -306	"	KD-W110U/NU (")	
⚠	60	QMP9017-008BS	Power Cord	KD-W110B/NB	1
⚠	"	QMP2560-200	"	KD-W110A/NA	1
⚠	"	QMP1200-200	"	KD-W110C/J/NC/NJ	1
⚠	"	QMP3900-200	"	KD-W110E/NE	1
⚠	"	QMP7600-200	"	KD-W110U/NU	1
⚠	61	QHS3876-162	S.R. Bushing		1
⚠	"	" -162BS	Cord Stopper	KD-W110B/NB	1
	62	VMW4680-001	P.W.B.	KD-W110A/B/E/NA/NB/NE	1
⚠	63	QFZ9010-103	M.P. Capacitor	KD-W110B/A/NB/NA	1
⚠	"	QCZ9014-103	C. Capacitor	KD-W110C/J/NC/NJ	1
⚠	64	QSS2325-203	Slide Switch	S901 KD-W110A/E/NA/NE	1
⚠	"	" -203BS	"	" KD-W110B/NB	1
	65	VKZ4001-011	Wire Holder		1
	66	SDSP3006R	Screw	V.S. Switch	2
	67	VKL4275-001	Bracket		1
	68	SDSP3006R	Screw	Bracket	2
	69	TAW000504-01	Connector	KD-W110C/J/U	2
	70	VTP57C3-031B	Power Transformer	KD-W110A/E	1
	"	" -031BS	"	KD-W110B	1
	"	VTP57AC-011B	"	KD-W110C/J	1
	"	VTP57U3-031B	"	KD-W110U	1
	71	SDST3006Z	Screw	Transformer	4
	72	SDST3006Z	"	Lug	2

Parts Comparison Table between Mecha. A and Mecha. B (Refer see page 20)

Ref. No.	Mecha. A Parts No.	Q'ty	Mecha. B Parts No.	Q'ty	Parts Name
3	18200201T	1	18200202T	1	Rec. Stopper
5	–	1	18000201T		Rec. Safety Lever
8	VGH0424-013	1	VGH0421-005	1	P.B. and R/P Head
10	VGH0102-901	1	VGH0212-103	1	E. Head
45	182009501ZT	1	18200903AT	1	RF Slide Lever
60	–		18201051ZT	1	Pause Button Lever Ass'y
61	–		18000903T	1	Button Spring
72	–		18201041T	1	Pause Lever Spring
73	–		18201034T	1	Pause Lever Spring
74	–		18201032T	1	Stopper
75	18201009T	1	18201042T	1	Button Cam
100	MSW-1275(T)	1	–		Leaf Switch (FF, REW)
102	18201013T	1	–		MS Function Plate
103	18201036T	1	–		RF Stopper
104	182015302ZT	1	–		MS Lever Ass'y
105	18201505T	1	–		MS Lever Spring
106	17001513T	1	–		Core B
107	182015301T	1	–		Coil Ass'y
133	SPSP2004Z	1	–		Screw (FF, REW)
157	SSSK2030M	1	–		Screw (RF Stopper)

To be continued on page 19

Exploded view of Enclosure Assembly

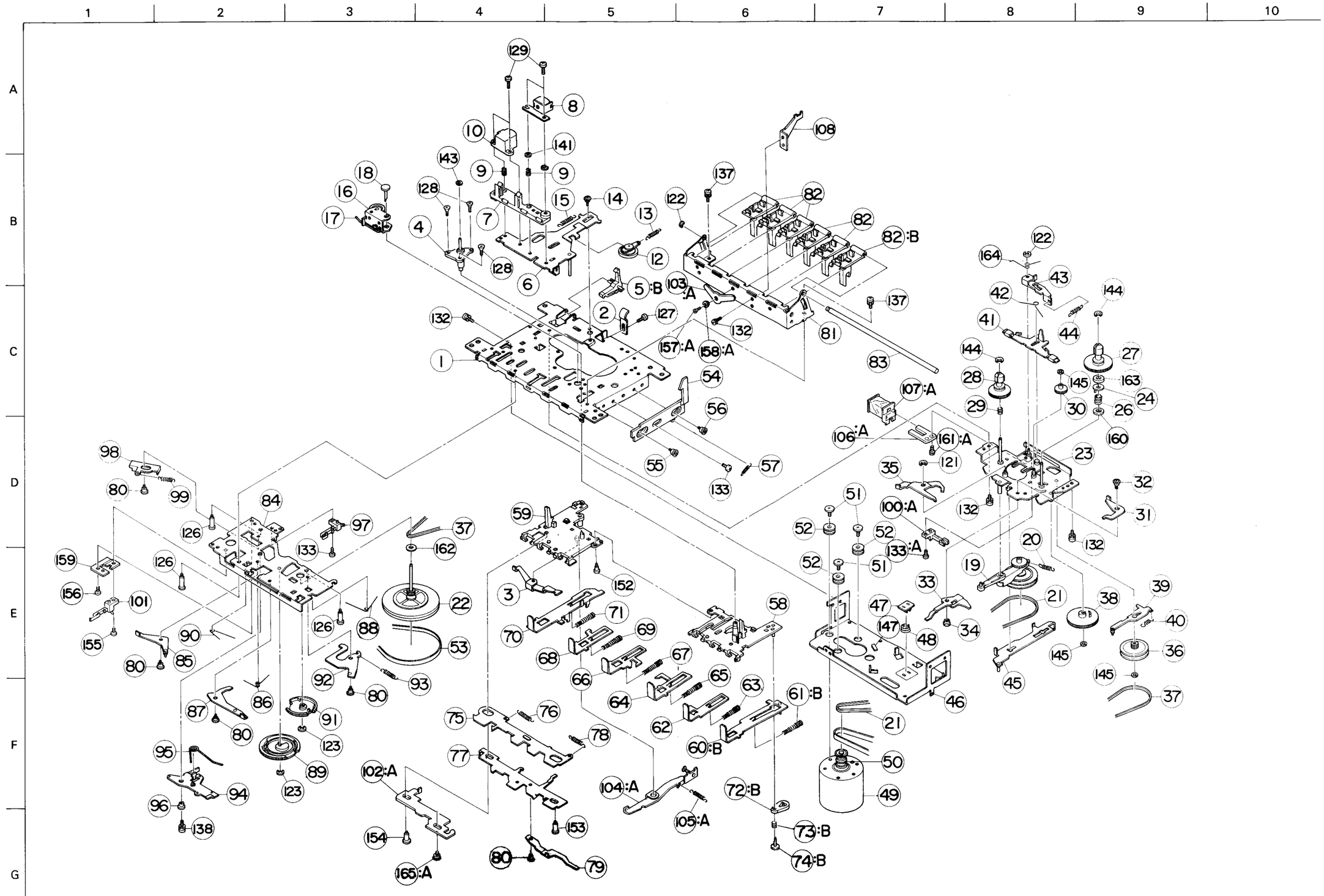


Continued from page 18

Ref. No.	Mecha. A Parts No.	Q'ty	Mecha. B Parts No.	Q'ty	Parts Name
158	18201014T	1	–		RF Stopper Collar
161	LPSP2005Z	1			Screw (Core B)
165	18201051	1	–		Collar Screw

KD-W110A/B/C/E/J/U/E/NA
NC/NJ/NU/NE

Exploded view of Mechanism Assembly



Parts List of Mechanism Assembly

⚠ parts are safety assurance parts. When replacing those parts, make sure to use the specified one.

(Refer see page 18)

⚠	Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
	1	18200101T	Chassis Base		1
	2	18200102T	Pack Spring		1
	3	18200202T	Stopper		1
	4	18201207T	Flywheel Metal		1
	5	18000201T	Rec. Safety Lever		1
	6	182003501ZT	Head Panel		1
	7	18200311T	Head Base		1
	8	VGH0421-005	R/P Head		1
	9	14400315T	Spring	R/P Head	1
	"	14400315T	"	Eraser Head	1
	10	VGH0212-103	Eraser Head		1
	12	182003301ZT	Take-up Roller	Take-up Roller	1
	13	18200312T	Spring	Take-up Roller Plate	1
	14	18200316T	Head P. Collar Screw		1
	15	18200302T	Spring	Head Panel	1
	16	182004303ZT	Pinch Roller		1
	17	18200403T	Pinch Roller Spring	Pinch Roller	1
	18	17152015T	Stopper	"	1
	19	182007301ZT	RF Clutch Ass'y		1
	20	18200704T	Spring	RF Clutch Arm	1
	21	17100603T	RF Belt		1
	22	182012307ZT	Flywheel Ass'y		1
	23	182005501ZT	Reel Bracket Ass'y		1
	24	18200814T	A.S. Detect Piece		1
	26	18200817T	A.S. Detect Piece Spring		1
	27	182006301ZT	Take-up Reel Ass'y		1
	28	182006302ZT	Supply Reel Ass'y		1
	29	18200608T	Back Tension Spring		1
	30	18000610T	Gear	FF	1
	31	18200910T	T.R. Kick Lever		1
	32	18200818T	Collar Screw	T.R. Kick Lever	1
	33	18200805T	Auto Stop Lever		1
	34	18200811T	Collar	Auto Stop	1
	35	18200911T	Kick Lever		1
	36	18200801T	Pulley		1
	37	18200809T	Belt	Auto Stop	1
	38	18200802T	Cam Gear		1
	39	18200803T	Detect Lever		1
	40	18200810T	Detect Lever Spring	Detect Lever	1
	41	182009301ZT	Brake Arm Ass'y		1
	42	18200902T	Brake Spring	Brake	1
	43	18200905T	A.S.G. Lever		1
	44	15591409T	Spring		1
	45	18200903AT	Lever		1
	46	18201301T	FM Bracket		1
	47	18201302T	FL. Thrust Plate		1
	48	18201310T	Thrust Spring		1
⚠	49	XMI-6B2HWV	DC Motor		1
	50	18201307T	Motor Pulley		1
	51	18201305T	Collar Screw	Motor	3
	52	18201306T	Rubber Cushion	Motor	3
	53	18201309T	Capstan Belt		1
	54	18201401T	Eject Lever		1
	55	18201418T	Collar Screw	Eject Lever	1
	56	18201419T	"	"	1
	57	15590306T	Spring	Eject Lever	1
	58	18201001AT	Button Base (L)		1
	59	18201002AT	" (R)		1
	60	182010501ZT	Lever Ass'y	PAUSE Button	1
	61	18000903T	Button Lever Spring	Button Lever	1

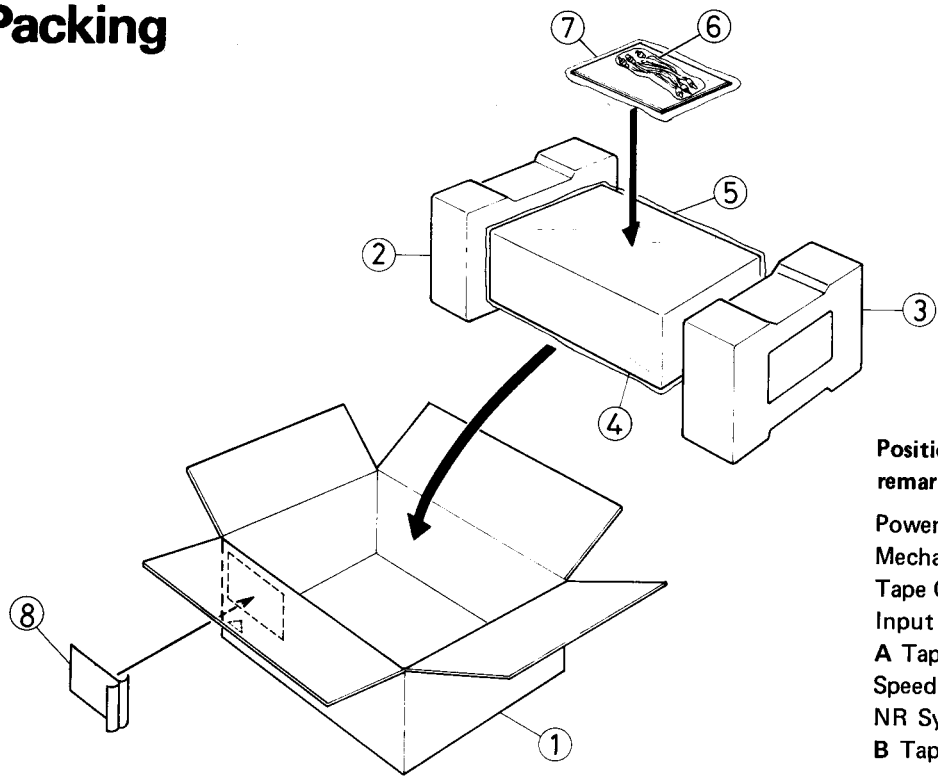
⚠	Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
	62	18201022T	Lever	STOP Button	1
	63	18201027T	Button Lever Spring	Button Lever	1
	64	18201021T	Lever	FF Button	1
	65	18000903T	Button Lever Spring	Button Lever	1
	66	18201020T	Lever	REW Button	1
	67	18201026T	Button Lever Spring	Button Lever	1
	68	18201019T	Lever	PLAY Button	1
	69	18201026T	Button Lever Spring	Button Lever	1
	70	18201018T	Lever	REC Button	1
	71	18201026T	Button Lever Spring	Button Lever	1
	72	18201041T	Lever		1
	73	18201034T	Pause Lever Spring	Pause Lever	1
	74	18201032T	Stopper	"	1
	75	18201042T	Cam		1
	76	18201052T	Spring	Button Cam	1
	77	18201010T	Switch Cam		1
	78	18201031T	Spring	Switch Cam	1
	79	18201011T	Kick Lever	Eject	1
	80	18200819T	Collar Screw	Eject Kick Lever	1
	"	18200819T	"	REC Function Plate	1
	"	18200819T	"	Pause Arm Ass'y	1
	"	18200819T	"	P. Trigger Arm	1
	"	18200819T	"	M. Trigger	1
	81	18201015T	Button Frame		1
	82	18201028T	Function Lever		6
	83	18201016T	Lever Shaft		1
	84	182011509ZT	Chassis Base Ass'y	Sub	1
	85	182011510ZT	M. Trigger Arm Ass'y		1
	86	18201126T	Spring	M. Trigger Arm	1
	87	182011503ZT	P. Trigger Arm Ass'y		1
	88	18201127T	Spring	P. Trigger Arm	1
	89	18201103T	Main Gear		1
	90	18201131T	Spring	Main Gear	1
	91	18201104T	Pause Gear		1
	92	182011504ZT	Pause Arm Ass'y		1
	93	17000932T	Spring	Pause Arm Ass'y	1
	94	182011505ZT	Lift Arm Ass'y		1
	95	18201129T	Spring	Lift Arm	1
	96	18201130T	Collar	"	1
	97	64010170T	Leaf Switch	MSW-1412TNBK	1
	98	18201152T	REC Function Plate		1
	99	17001612T	Spring	REC Function Plate	1
	101	MSW-0094CNBKT	Leaf Switch		1
	108	18201035T	B. Shaft Stopper	Button Frame	1
	121	REE1200(T)	E-Ring	Kick Lever	1
	122	REE1500(T)	"	A.S. Guard Lever	1
	"	REE1500(T)	"	Lever Shaft	1
	123	REE2000(T)	"	Pause Gear	1
	"	REE2000(T)	"	Main Gear	1
	126	18201137T	Collar Screw	Sub Chassis	3
	127	SPST2603Z(T)	Th. Tap. Screw	Pack Spring	1
	128	SSSK2030M	Mini Screw	FL Metal	3
	129	SPSX2007Z(T)	PM. Screw	Eraser Head	2
	"	SPSX2007Z(T)	"	R/P Head	2
	132	LPSP2004Z	Screw	Reel Bracket	2
	"	LPSP2004Z(T)	Ass'y Screw	FM Bracket	1
	"	LPSP2004Z(T)	"	Shaft Stopper	1
	133	SPSP2004Z(T)	Screw	Leaf Switch	1
	"	SPSP2004Z(T)	"	FM Bracket	1
	137	LPSP2604Z(T)	"	Button Frame	2

⚠	Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
	138	LPSP2606Z(T)	Screw	Lift Arm	1
	141	93160000T	Washer	Head	1
	143	93720000T	Nylon Washer	Oil Cut	1
	144	94970000T	E-Ring	Supply Reel	1
	"	94970000T	"	Take-up Reel	1
	145	94210000T	Washer	Pulley	1
	"	94210000T	"	Cam Gear	1
	"	94210000T	"	FF Gear	1
	147	04461102T	Mat		1
	152	18201025T	Collar Screw	Button Base	1
	153	18201029T	"	Switch Cam	1
	154	18201030T	"		1
	155	SDSP2004Z(T)	Screw	Leaf Switch	1
	156	SPST2004Z(T)	"		1
	159	18201148T	Leaf Switch Bracket		1
	160	97910000T	Polyslider Washer		1
	162	97880000T	"	Thrust	1
	163	18200807T	Felt		1
	164	18200913T	Spring		1

Accessories

⚠	Parts No.	Parts Name	Remarks	Q'ty
	VNN0130-901	Instruction Book	KD-W110A/B/C/E/J/U	1
	VND4013-001	Warning Label	KD-W110A/B/E	1
	VNC5004-001	Mark Sticker	KD-W110B/ED/NED	1
	QZL1002-003	Warning Label	KD-W110B/NB	1
	TJL000443-01	Seal	KD-W110B/NB	1
	VNC5004-001	Mark Sticker	BEEB Label	1
	VND4051-001	CSA Fuse Seal	KD-W110C/NC	1
	TLT000505-01	UL/CSA Caution Label	KD-W110C/NC	1
	T44362-001	CSA Label		1
	VND4057-001	UL Fuse Seal	KD-W110J/NJ	1
	VNC5005-002	LA Label		1
	VNC5311-202	Caution Card	KD-W110U/NU	1
	" -201	"	"	1
	BT20064	Warranty Card	KD-W110B/ED/NED/NB	1
	BT20066	"	"	1
	BT20029C	"	KD-W110A/NA	1
	BT20025F	"	KD-W110C/NC	1
	BT20047A	"	KD-W110J/U/NJ/NU	1
	BT20046B	Special Reply Card	KD-W110J/U/NJ/NU	1
	BT20044D	Safety Instruction	KD-W110J/NJ/NU	1
	BT20071	Service Center List	KD-W110C/NC	1
	VMP0002-00B	Pin Cord		2
	V04062-001	Siemens Plug	KD-W110U/NU	1
	VND4113-001	G Coution	KD-W110B/J/NB/NJ	1
	VND4037-002	F Mark	KD-W110ED/NED	1
	VNC1200-002	Copyright Law-warning	KD-W110B/C/E/NB/NC/NE	1

Packing



Positions of controls and switch knobs at remarked packing renewed:

Power Switch	OFF
Mechanism Operation Button	OFF
Tape Counter	000
Input Level	MIN
A Tape Select	NORM
Speed	NORM
NR System	OFF
B Tape Select	NORM

Packing Parts List

⚠	Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
	1	VDP2123-J03	Carton	KD-W110A	1
	"	" -J02	"	KD-W110B	1
	"	" -J04	"	KD-W110C	1
	"	" -J05	"	KD-W110E	1
	"	" -J06	"	KD-W110J	1
	"	" -J07	"	KD-W110U	1
	"	VDP2132-J03	"	KD-W110NA	1
	"	" -J02	"	KD-W110NB	1
	"	" -J04	"	KD-W110NC	1
	"	" -J05	"	KD-W110NE	1
	"	" -J06	"	KD-W110NJ	1
	"	" -J07	"	KD-W110NU	1
	2	VPH3111-001	Cushion		1
	"	VPH3112-001	"		1
	3	VPE3004-026	Poly Bag		1
	4	" -007	"	for Instructions Book	1
	5	TKS000501-08	Sheet		1
	6	AP4056A-36	Envelope		1
	7	VPZ4001-001	Serial Ticket		2
	8	E66416-003	Envelope	KD-W110J, KD-W110U (PX, EES)	1
		Q04141H	Wire Clamp	for Power Cord	1

JVC
VICTOR COMPANY OF JAPAN, LIMITED
RADIO & RECORDING MACHINE DIVISION 10-1, 1-chome, Ohwatari-cho, Maebashi-city, Japan